



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,512	10/08/2002	Christophe Leleu	74.0241	7981
26479	7590	05/12/2004	EXAMINER	
STRAUB & POKOTYLO 620 TINTON AVENUE BLDG. B, 2ND FLOOR TINTON FALLS, NJ 07724			LE, JOHN H	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,512

Applicant(s)

LELEU, CHRISTOPHE

Examiner

John H Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II (Claims 10-13) in statement mail date 04/19/2004 with traverse is acknowledged. Accordingly, claims 1-9 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. Applicant has the right to file a divisional application covering the subject matter of the non-elected claims 21-37.
2. Applicant's election with traverse of Group II (Claims 10-13) in statement mail date 04/19/2004 is acknowledged. The traversal is on the ground(s) that the claims of Group I (Claims 1-9) and Group II (Claims 10-13) are closely related and could be reviewed with a single prior art search. This is not found persuasive because the method of measuring the propagation time of an ultrasound signal between two spaced-apart transducers of group I does not required comparator means connected to a receiver transducer to compare the amplitude of the receive signal with a trigger threshold voltage and to generate a signal representative of oscillations of said receive signal and means for measuring a fixed time connected to means for forming an excitation signal in order to measure a fixed time from the instant at which the emitter transducer is excited of group II and the apparatus for measuring the propagation time of an ultrasound signal of group II does not required steps of stopping measurement of the intermediate propagation time when an i_{th} oscillation is detected; and determining the propagation time of the signal by taking the difference $T_{int} - i \times T_e$ of group I. Also,

Art Unit: 2863

the strategies for doing text searching for group I and group II are different. Thus, separate searches are required.

The requirement is still deemed proper and is therefore made FINAL.

Specification

3. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See 37CFR 1.72.

4. The abstract of the disclosure is objected to because of the form and legal phraseology often used in patent claims, such as "comprises" (line 8) and "said" (line 6) should be avoided.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beneteau et al. (USP 6,696,843) in view of Becker et al. (DE 4017022A).

Regarding claim 10, Beneteau et al. teach an ultrasonic fluid meter comprises two ultrasound transducers defining a measurement path between them. Beneteau et al. teach an apparatus for measuring the propagation time of an ultrasound signal (Col.3, lines 61-66), means 12 for forming an excitation signal (e.g. Col.7, lines 27-31); an emitter transducer connected to said means for forming an excitation signal (e.g. Col.7, lines 29-30); a receiver transducer 2 to transform the ultrasound signal into a receive signal (e.g. Col.7, lines 35-40); and comparator means 46 connected said receiver transducer 2 (Col.8, lines 12-20).

Beneteau et al. fail to teach comparator means connected said receiver transducer to compare amplitude of the receive signal trigger threshold voltage and generate signal representative of oscillations of said receive signal.

Becker et al. teach comparator means connected said receiver transducer to compare amplitude of the receive signal trigger threshold voltage and generate signal representative of oscillations of said receive signal (Becker et al., Translation, Page 4); wherein the apparatus further comprises: means for measuring a fixed time connected to said means forming an excitation signal in order to measure fixed time from the instant at which the emitter transducer is excited (Becker et al., Translation, Page 5); means for determining an oscillation, which means are connected said comparator means, to count the number oscillations in the receive signal and detect the oscillation (Becker et al., Translation, Pages 2, 5); and means for measuring a variable time between the end of measuring the fixed time and detecting the oscillation (Becker et al., Translation, Page 1).

Art Unit: 2863

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a comparator means connected said receiver transducer to compare amplitude of the receive signal trigger threshold voltage and generate signal representative of oscillations of said receive signal as taught by Becker et al. in an ultrasonic fluid meter of Beneteau et al. for the purpose of providing the improvement of the precision of ultrasound-transit time measurements and the expansion of the usage area (Becker et al., Translation, Page 2).

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beneteau et al. (USP 6,696,843) in view of Becker et al. (DE 4017022A) as applied to claim 10 above, and further in view of Fletcher-Haynes (USP 5,777,238).

Regarding claim 11-13, the combination of Beneteau et al. and Becker et al. discussed supra, discloses the claimed invention except a decoder and a time expander circuit.

Fletcher-Haynes discloses a decoder (Col.17, lines 26-30) and an expanded time scale (Col.11, lines 46-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a decoder and an expanded time scale as taught by Fletcher-Haynes in an ultrasonic fluid meter of Beneteau et al. in view of Becker et al. for the purpose of providing the improved hardware and software implemented features which, although low in cost, enable the flowmeter to provide an accuracy and resolution which is comparable to or better than the more complex and/or expensive flowmeters used heretofore (Fletcher-Haynes, Col.3, lines 29-34).

Art Unit: 2863

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275.

The examiner can normally be reached on 9:00 - 5:30.

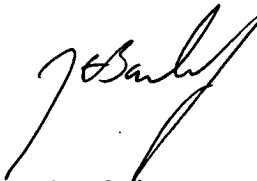
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

April 28, 2004



John Barlow
Supervisory Patent Examiner
Technology Center 2800